

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002	
BUDGET ACTIVITY 03 - Advanced Technology Development				PE NUMBER AND TITLE 0603253F Advanced Sensor Integration					
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	5,061	0	0	0	0	0	0	Continuing	TBD
2735 Avionics Integration Technology	1,885	0	0	0	0	0	0	Continuing	TBD
666A Sensor Fusion & Integration Tech	3,176	0	0	0	0	0	0	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

In FY 2002, the remaining efforts in Projects 2735 and 666A were transferred to PE 0603203F, Project 665A.

(U) **A. Mission Description**
 This program develops and demonstrates advanced radio frequency sensors and integration techniques for intelligence, surveillance, and reconnaissance functions. Specifically, this program develops and improves: digital receiver components for air moving target indication and advanced unmanned aerial vehicle applications; advanced Global Positioning System receivers and anti-jam techniques for aerospace platforms; aircraft communications, navigation, and identification technologies; technologies for low-probability-of-detection communication between aircraft to improve aircrew situational awareness; and collaborative engineering environments to evaluate methods for integrating on-board and off-board sensor data.

(U) **B. Budget Activity Justification**
 This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new sensor and electronic combat system developments that have military utility and address warfighter needs.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
(U) Previous President's Budget	5,301	0	0	
(U) Appropriated Value	5,350	0		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions				

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

03 - Advanced Technology Development**0603253F Advanced Sensor Integration**(U) C. Program Change Summary (\$ in Thousands) Continued

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
b. Small Business Innovative Research	-126			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram	-114			
e. Rescissions	-49			
(U) Adjustments to Budget Years Since FY 2002 PBR				
(U) Current Budget Submit/FY 2003 PBR	5,061	0	0	TBD
(U) <u>Significant Program Changes:</u> In FY 2002, the remaining efforts in Projects 2735 and 666A were transferred to PE 0603203F, Project 665A.				

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2002	
BUDGET ACTIVITY 03 - Advanced Technology Development				PE NUMBER AND TITLE 0603253F Advanced Sensor Integration				PROJECT 2735	
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
2735 Avionics Integration Technology	1,885	0	0	0	0	0	0	Continuing	TBD
<p>In FY 2002, the remaining efforts in this project were transferred to PE 0603203F, Project 665A.</p> <p>(U) <u>A. Mission Description</u> This project develops and demonstrates advanced radio frequency (RF) sensors for integrated intelligence, surveillance, and reconnaissance (ISR) functions on aerospace platforms. These advanced technologies will enable sensors to gather and process information from air- and space-based assets, integrate on-board and off-board sensor data, and perform sensor management functions.</p> <p>(U) <u>FY 2001 (\$ in Thousands)</u> (U) \$1,885 Developed and demonstrated advanced modular, sharable digital RF sensor technologies for aerospace sensor suites performing ISR applications. Fabricated and tested dual-use, modular, digital RF receiver components for multimode radar operation. (In FY 2002, this work was transferred to PE 0603203F, Project 665A.) (U) \$1,885 Total</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u> (U) \$0 Effort transferred to PE 0603203F, Project 665A. (U) \$0 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u> (U) \$0 No Activity (U) \$0 Total</p> <p>(U) <u>B. Project Change Summary</u> Not Applicable.</p>									
Project 2735			Page 3 of 6 Pages			Exhibit R-2A (PE 0603253F)			

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2002
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
03 - Advanced Technology Development	0603253F Advanced Sensor Integration	2735
<p>(U) <u>C. Other Program Funding Summary (\$ in Thousands)</u></p> <p>(U) Related Activities:</p> <p>(U) PE 0603204F, Aerospace Sensors.</p> <p>(U) PE 0603203F, Advanced Aerospace Sensors.</p> <p>(U) PE 0603270F, Electronic Combat Technology.</p> <p>(U) This project has been coordinated through the Reliance process to harmonize efforts and eliminate duplication.</p> <p>(U) <u>D. Acquisition Strategy</u></p> <p>Not Applicable.</p> <p>(U) <u>E. Schedule Profile</u></p> <p>(U) Not Applicable.</p>		
Project 2735	Page 4 of 6 Pages	Exhibit R-2A (PE 0603253F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2002	
BUDGET ACTIVITY 03 - Advanced Technology Development				PE NUMBER AND TITLE 0603253F Advanced Sensor Integration				PROJECT 666A	
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
666A Sensor Fusion & Integration Tech	3,176	0	0	0	0	0	0	Continuing	TBD
<p>In FY 2002, the remaining efforts in this project were transferred to PE 0603203F, Project 665A.</p> <p>(U) <u>A. Mission Description</u> This project develops and demonstrates advanced reference and information transmission technologies required for precise navigation and targeting and reliable information links for future Air Force information architectures. Specifically, this project develops the advanced techniques for exploiting and protecting the capabilities of the Global Positioning System (GPS) to provide highly accurate reference data for precision targeting and location of enemy air defense radars. In addition, this project develops high-speed, jam-resistant, low-probability-of-detection information transmission technologies and techniques to improve overall aircrew situational awareness, reduce electromagnetic signatures of navigation and communication systems, and increase aircraft survivability. The focus is on transitioning transceivers, inertial components, and navigation system technology into air vehicles. Technologies demonstrated under this project are needed for real-time information-in-the-cockpit, stealth operations, precision targeting and strike, timely bomb damage assessment, force multiplication through multiplatform shared resources, and supportable weapon systems.</p> <p>(U) <u>FY 2001 (\$ in Thousands)</u> (U) \$3,176 Developed technologies to maximize GPS jam resistance, positional accuracy, and exploitation techniques to improve offensive and defensive combat capabilities. Refined GPS receiver processing technology and direct signal acquisition techniques. Continued evaluation of GPS modernization candidate military signals for exploitable vulnerabilities. (In FY 2002, this effort was transferred to PE 0603203F, Project 665A.) (U) \$3,176 Total</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u> (U) \$0 Effort transfers to PE 0603203F, Project 665A. (U) \$0 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u> (U) \$0 No Activity (U) \$0 Total</p>									
<div style="display: flex; justify-content: space-between;"> Project 666A Page 5 of 6 Pages Exhibit R-2A (PE 0603253F) </div>									

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2002
BUDGET ACTIVITY 03 - Advanced Technology Development	PE NUMBER AND TITLE 0603253F Advanced Sensor Integration	PROJECT 666A
<p>(U) <u>B. Project Change Summary</u> Not Applicable.</p> <p>(U) <u>C. Other Program Funding Summary (\$ in Thousands)</u></p> <p>(U) Related Activities:</p> <p>(U) PE 0602204F, Aerospace Sensors.</p> <p>(U) PE 0602782A, Command, Control, Communications Technology.</p> <p>(U) PE 0602232N, Navy C3 Technology.</p> <p>(U) PE 0603203F, Advanced Aerospace Sensors.</p> <p>(U) PE 0603270F, Electronic Combat Technology.</p> <p>(U) This project has been coordinated through the Reliance process to harmonize efforts and eliminate duplication.</p> <p>(U) <u>D. Acquisition Strategy</u> Not Applicable.</p> <p>(U) <u>E. Schedule Profile</u></p> <p>(U) Not Applicable.</p>		
Project 666A	Page 6 of 6 Pages	Exhibit R-2A (PE 0603253F)